



Armed Forces College of Medicine

AFCM



Endocrine and urogenital module

Clinical Integrated Cases Pretest 1

Question 1



Why does the thyroid move up and down with deglutition ?

- A. It's enclosed by investing layer of deep fascia
- B. It's enclosed by pretracheal fascia
- C. It's enclosed by prevertebral fascia
- D. Due to attachment of sternothyroid muscle
- E. Due to attachment of thyrohyoid muscle

Question 2



What is the nerve the surgeon should be aware not to injure during superior thyroid artery ligation in thyroidectomy operation?

- A. Superior laryngeal
- B. Internal laryngeal
- C. External laryngeal
- D. Recurrent laryngeal
- E. Ansa cervicalis

Question 3



Which of the following types of enzymes is required for the conversion of iodinated thyroglobulin to active thyroid hormones (T3 and T4) in the cytoplasm of follicular epithelial cells?

- (A) Thyroperoxidase
- (B) Lysosomal protease
- (C) Myeloperoxidase
- (D) Serine phosphatase
- (E) Tyrosine kinase

Question 4



As part of your research on mechanisms of thyroid hormone secretion, you develop a monoclonal antibody directed against the sodium/iodide cotransporter (symporter). Using indirect immunofluorescence assays, you demonstrate that this antibody specifically binds (labels) which of the following cells and membranes within the thyroid gland?

- (A) Apical membranes of capillary endothelial cells
- (B) Apical membranes of follicular epithelial cells
- (C) Basolateral membranes of capillary endothelial cells
- (D) Basolateral membranes of follicular epithelial cells

Question 5



Which of the following mechanisms are involved in weight loss for a thyrotoxic patient?

- a. Calorigenesis and lipolytic action of thyroid hormones
- b. Anabolic effects of thyroid hormones
- c. Decreased appetite caused by thyroid hormones
- d. Antithyroid antibodies direct effect
- e. Low levels of TSH & TRH causing weight loss

Question 6



A 37 years old female complained of some GIT disturbances, palpitations and excessive sweating with heat intolerance. Thyroid profile showed: Elevated free T3 & T4 with high levels of TSH.

What's the most probable underlying cause?

- a. Anti-thyroid block antibodies
- b. Anti-thyroid stimulating antibodies
- c. Hyperplasia in thyrotropes
- d. Supra-thyroid cause for hypothyroidism
- e. Thyroid tissue destruction by viral infection

Question 7



A 41 years old female complained of weight loss, palpitations and nervousness. Clinical examination and investigations revealed Grave's disease. The mechanisms causing palpitation in this patient are all of the following EXCEPT which one?

- a. Increased sensitivity to circulating catecholamines
- b. Direct effect on SA node
- c. Secondary calorigenic effect
- d. Stimulated suprarenal medulla

Question 8



Which of the following is NOT a cell surface receptor?

- a) Enzyme linked receptors
- b) Ion-channel linked receptors
- c) G protein linked receptors
- d) Thyroid hormone receptor
- e) Tyrosine kinase receptors

Question 9



Which of the following is a characteristic of chemical messengers that bind to intracellular transcription factor receptors?

- (A) They are usually cytokines or polypeptide hormones.
- (B) They are usually small molecule neurotransmitters.
- (C) They exert rapid actions in cells.
- (D) They are transported through the blood bound to proteins.

Question 10



Exophthalmos, weight loss and palpitations are seen in which of the following thyroid diseases?

- a) Simple nodular goiter
- b) Hashimoto's thyroiditis
- c) Graves's disease
- d) Riedle's thyroiditis
- e) De Quervain thyroiditis

Question 11



Which of the following gross features is seen in thyroid gland in Grave's disease?

- a) Grayish white in colour with firm and rubbery in consistency
- b) Moderate diffuse symmetrical enlargement with pink cut section
- c) Stony hard with adherence to the adjacent structures
- d) Asymmetrical enlargement with nodular outer surface

Question 12



Which of the following explains the use of propranolol in cases of hyperthyroidism ?

- a. It blocks the T3 nuclear receptor
- b. It inhibits oxidation step in thyroid hormone synthesis
- c. It inhibits the conversion of T3 to T4
- d. It prevents the release of thyroid hormones from follicles
- e. It controls the CVS symptoms and prevents conversion of T4 to T3

Question 13



Regarding the safety of antithyroid drugs during pregnancy, which of the following is considered true ?

- a. Both carbimazole and propylthiouracil are safe during pregnancy
- b. Carbimazole is teratogenic in the first trimester
- c. Propylthiouracil is teratogenic in the first trimester
- d. Propylthiouracil is used during whole pregnancy period
- e. Carbimazole can lead to liver failure if taken during

Question 14



Which of the following symptoms may be a presentation of a patient with thyrotoxicosis?

- A. Constipation
- B. Cold intolerance
- C. Palpitation
- D. Anorexia
- E. Hypersomnia

Question 15



Which of the following results is not present in investigations of a patient with primary hyperthyroidism?

- A. Increase FT4 level
- B. Increase FT3 level
- C. Decrease TSH level
- D. Diffuse goiter in ultrasound
- E. Decrease uptake in technetium scintigraphy



Thank
you





Thyroid hormones are described by which of the following?

- a. The amount of T3 secreted is about 20 times greater than T4.
- b. Bound form is the biologically active form.
- c. Peroxidase is responsible for oxidation of iodine to iodide.
- d. Amino acid tyrosine is one of components in hormone synthesis.

Question 6



Feedback regulation of thyroid hormone is illustrated by:

- a. high circulating levels of free T3 and T4, which elevate TRH.
- b. high circulating levels of free T3 and T4, which elevate TSH.
- c. high circulating levels of free T3 and T4, which reduce TRH.
- d. reduced TRH, which elevates TSH.